**METHOD:** Inappropriate geriatric medications were defined by well accepted explicit criteria. Logistic models were employed to estimate the likelihood functions using the 1996 Medical Expenditure Panel Survey (MEPS), based on a national representative sample of the non-institutionalized populations. Complex survey sample design was adjusted in modeling.

**RESULTS:** When grouping all types of insurance together, a dichotomous insurance variable captured no difference in the likelihood of inappropriate medication use between the insured and the uninsured groups. After distinguishing the insurance type, it was found that the elderly with fee-for-service (FFS) coverage were more likely to use inappropriate prescriptions (OR = 1.73, 95% CI: 1.27–2.34), compared to those without coverage. This effect was reduced but remained significant after controlling for the total number of prescriptions (OR = 1.39, 95% CI: 1.01–1.90). In contrast, people with HMO type of coverage were indifferent with the uninsured. Moreover, as expected, the most predictive variable of inappropriate prescriptions is the total number of medication use, followed by worse health conditions and women.

**CONCLUSION:** When analyzing insurance impact on drug utilization, distinguishing insurance type seemed to be important. This study suggested a higher risk with FFS model for inappropriate medication use compared to the uninsured and others, the first evidence of its kind based on a national database. While this finding offers some interesting implications for insurance policies, further research is warranted to discern the reasons for the observed adverse impact of FFS coverage.

**STOP: SMOKING CESSATION TARGET: OBSERVATORY PROGRAM, THE FRENCH PHYSICIAN’S PROGRESS**

**OBJECTIVE:** The general practitioner is often the first professional involved in the treatment of tobacco dependence, when he or she responds to the explicit request of smokers to help end their tobacco consumption or asks his or her patients about their situation in relation to tobacco.

**METHOD:** The STOP programme, through a questionnaire distributed to around 6,000 doctors, aims to describe the progress doctors are making with regard to their own tobacco dependence as well as in the public health initiative entrusted to them.

**RESULTS:** Here we present the preliminary results of this investigation, through the analysis of the first 300 questionnaires. The average age of our sample was 45 years; 75% were men. For 41% of the doctors that responded, the setting up of a treatment programme takes place during a specific consultation. The information supports used come from the pharmaceutical industry (62%), health insurance companies and anti-smoking associations (38%), 82% felt that the most relevant support was patient information that they could distribute and that would back up verbal advice. If 51% of doctors state that they have never smoked, 62% of the smokers expressed a desire to give up smoking, and 85% of them do not consider their status as smokers as a hindrance to beginning smoking cessation treatment with their patients. Lack of training (3%), skepticism as to the effectiveness of available treatments (4%), the absence of specific remuneration (4%), do not seem to be the reasons for not beginning smoking cessation treatment with their patients, unlike lack of time (49%) and patient resistance (41%).

**CONCLUSION:** First professional involved, the general practitioner should thus be recognised as a real partner in Health policy and improve their commitment with it.

**MEDICATION SUPPORT PROGRAM IMPROVES MEDICATION COMPLIANCE**

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Positive clinical outcomes are dependent on patients adhering to their treatment plans. Improving patients’ medication compliance through a mail-based medication support program that promotes preferred formulary agents leads to improved clinical outcomes. It also results in a win-win-win situation for patients, payers and industry partners by increasing appropriate and cost-effective utilization.

**OBJECTIVES:** This study assesses the effectiveness of a mail-based medication support program designed to increase prescription refill rates for selected maintenance medications. All patients taking selected medications are sent a welcome package. Patients late in refilling their prescriptions are sent a reminder letter. Patients who do not refill are sent a second reminder letter. Patients who remain non-compliant may be called by a nurse case manager. Patients who refill a new prescription on a timely basis are sent a congratulations letter.

**METHODS:** In phase one, refill rates for patients receiving one or more refill reminder letters are compared with the refill rates for a comparison sample of patients who did not receive reminder letters. In phase two, to be completed Q1 2002, we will compare the refill rates and cost profiles between selected medications and a similar class of unselected medications.

**RESULTS:** Phase one results show that patients who received reminder letters proceeded to have 14,731 fills, 537,321 units for 431,200 days supply. This compares to the control group, which had 10,329 fills, 376,736 units for 302,331 days supply. The difference between the groups shows that the intervention produced 4,403 fills, 160,585 units for 128,870 days supply.

**CONCLUSIONS:** Initial results show that a mail-based medication refill reminder program is an effective means
of improving refill rates. This leads to improved medication compliance and improved clinical outcomes. Because selected medications were also formulary-preferred agents, formulary compliance and volume within several key therapeutic categories was enhanced.

**SURVIVAL ANALYSIS IN SEDATED INTENSIVE CARE UNIT (ICU) PATIENTS**

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**OBJECTIVES:** To compare survival in sedated ICU patients by hospital type and to investigate various factors associated with patient survival.

**METHODS:** Data from 622 patients admitted to the ICU, intubated more than 24 hours, and receiving sedatives/analgesics during intubation were collected from 42 hospitals from November 22, 1999 to March 4, 2000. Patient demographic, sedative and analgesic selection, and outcome data were recorded on standard data forms. The Kaplan-Meier (KM) survival curves and the Cox proportional hazard model were used to examine the effect of hospital type and other factors on patient survival.

**RESULTS:** Patients in teaching hospitals had a significantly higher survival rate compared to community hospitals (p < 0.02). The Cox regression analyses showed that patient mortality was significantly associated with older age (hazard ratio; HR = 1.03), higher severity of illness (HR = 1.04), having certain comorbid conditions [lymphoma (HR = 2.87) and chronic hypoxia (HR = 2.57)], receiving analgesic agents (e.g., morphine, hydromorphone, and fentanyl) (HR = 2.76) and receiving care in a community hospital (HR = 0.62). However, whether the patient received treatment consistent with practice guidelines for ICU sedation and was treated in a hospital with a care plan for ICU sedation had no significant impact on patient survival in this analysis.

**CONCLUSIONS:** The results suggest that patients admitted to teaching hospitals seem to have better survival compared to community hospitals controlling for other factors that impact patient outcomes. However, whether this is due to hospital type, some other patient care practice or patient factors needs to be determined.

**HEALTH POLICY—Economic Outcomes**

**Presentations**

**PHP21**

**THERAPEUTIC INTERCHANGEABILITY OF LEVOTHYROXINE**

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**OBJECTIVE:** This evidence-based review evaluates the therapeutic interchangeability of levothyroxine between the original product Synthroid, and the two major generic brands Levoxyl and Levothroid, for use in hypothyroidism.

**METHODS:** A literature search identified 8 bioequivalence trials comparing different formulations of levothyroxine tablets. Meta-analyses were conducted to compare average bioavailability using three pharmacokinetic measures (Total T4, Thyrotropin-stimulating Hormon [TSH], and Free Thyroxine Index [FTI]). These measures were also evaluated for differences in variability between treatment groups.

**RESULTS:** The three formulations of Synthroid, Levoxyl, and Levothroid can be expected to produce similar average levels of circulating total T4 and TSH at steady state. Due to limited data, this statement does not extend to levels of free T4 nor free T3. Meta-analyses suggest that differences may exist in the variability of effect of levothyroxine products. Specifically, individual TSH levels in treated hypothyroid patients may span a wider range with some products than with others. This variability may be due to true individual differences in the variability of absorption of these products or to the use of outdated assay techniques (first generation radioimmunoassay) and short study durations that do not allow enough time for the patient to reach steady-state.

**CONCLUSION:** Studies generally suggest that Synthroid, Levoxyl, and Levothroid are bioequivalent on average. However, population (between subject) variability may be different across products. Establishment of individual bioequivalence will require new, prospective studies of adequate treatment duration that use the most sensitive assay methodologies. Until such studies are undertaken, current treatment guidelines that recommend hypothyroid patients be reassessed 6 weeks after a change in brand or dose should remain in effect.